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HOFFMANN - EITLE Patent- und Rechtsanwälte Arabellastrasse 4 81925 München ALLEMAGNE

EINGEGANGEN

16. Juli 2001

HOFFMANN - EITLE, MÜNCHEN PATENTANWÄLTE RECHTSANWÄLTE

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Datum/Date 16.07.01

Zeichen/Ref./Réf.

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Anmeldung Nr./Application No./Demande n°./Patent Nr./Patent No./Brevet n°.

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Anmelder/Applicant/Demandeur/Patentinhaber/Proprietor/Titulaire
MITSUBISHI DENKI KABUSHIKI KAISHA

COMMUNICATION

The European Patent Office herewith transmits as an enclosure the European search report for the above–mentioned European patent application.

If applicable, copies of the documents cited in the European search report are attached.

Additional set(s) of copies of the documents cited in the European search report is (are) enclosed as well.

The following specifications given by the applicant have been approved by the Search Division:

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X title

The abstract was modified by the Search Division and the definitive text is attached to this communication.

The following figure will be published together with the abstract:

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REFUND OF THE SEARCH FEE

If applicable under Article 10 Rules relating to fees, a separate communication from the Receiving Section on the refund of the search fee will be sent later.





EUROPEAN SEARCH REPORT

Application Number EP 01 10 1690

		DERED TO BE RELEVANT			
Category	of relevant pa	indication, where appropriate, ssages		Relevant to claim	CLASSIFICATION OF THE APPLICATION (Int.CI.7)
Х	EP 0 671 801 A (NI		1		H02K9/06
Υ	13 September 1995	(1995-09-13) 4 - column 5, line 45;		1.0	H02K3/12
'	figures 1,2 *	4 - Corullin 5, Time 45;	2-	10	
X	PATENT ABSTRACTS 0 vol. 1997, no. 10, 31 October 1997 (1 & JP 09 172752 A (30 June 1997 (1997 * abstract *	997-10-31) DENSO CORP),	1,	4	
х	US 4 492 885 A (KI	 TAMURA YUTAKA ET AL)	1		
	8 January 1985 (19. * column 3, line 6 figure 2 *	35-01-08) - column 4, line 32;			. :
x	EP 0 671 803 A (NI	PPON DENSO CO)	1		
	13 September 1995 * column 3 line 4	(1995-09-13) l - column 6, line 38;			
	figure 1 *	r - corumn o, rine so,		j	TECHNICAL FIELDS SEARCHED (Int.Cl.7)
Y	US 4 757 221 A (KUI	 RIHASHI YASUTAKA ET AL)	2	3	HO2K
	12 July 1988 (1988-	-07-12) 5 - column 4, line 34;	-,		110 Z.K
Y	US 5 329 199 A (YO	CKEY STEVEN J ET AL)	4.5	5	
	12 July 1994 (1994-	-07-12)	'		
	figures 1-4,10-14 ×	5 - column 4, line 19;			
	12 March 1997 (1997	EO EQUIP ELECTR MOTEUR) (-03-12) (- column 3, line 19;	6		
		-/			
	The present search report has	been drawn up for all claims			
	Place of search	Date of completion of the search	1		Examiner
	MUNICH	6 July 2001		Tang	occi, A
X : partici Y : partici docum A : techno	FEGORY OF CITED DOCUMENTS Ularly relevant if taken alone ularly relevant if combined with anot nent of the same category plogical background	L : document cited for	cument le n the a or other	rlying the in , but publish pplication r reasons	vention
O : non-v	vritten disclosure lediate document	& : member of the sa document	ame pa	tent family,	corresponding

1



EUROPEAN SEARCH REPORT

Application Number EP 01 10 1690

		DERED TO BE RELEVANT		
Category	Citation of document with of relevant pa	indication, where appropriate, ssages	Relevant to claim	CLASSIFICATION OF THE APPLICATION (Int.CI.7)
Y	US 5 977 668 A (YO 2 November 1999 (1 * column 3, line 6 figures 1-3 *	SHIOKA NOBUATSU) 999-11-02) 4 - column 4, line 65;	7,8	·
Y	EP 0 917 278 A (DE 19 May 1999 (1999-	05-19) ´	9,10	
A	* column 5, line 1 figures 1-13 *	6 - column 8, line 53;	1-8	
A	EP 0 881 747 A (DE 2 December 1998 (19 * column 5, line 4) figures 1-12 *		1-10	
	EP 0 881 748 A (DE 2 December 1998 (19 * the whole docume	998-12-02)	1-10	·
	EP 0 881 749 A (DER 2 December 1998 (19 * the whole documer	998-12-02)	1-10	TECHNICAL FIELDS SEARCHED (Int.CI.7)
	19 September 1997 (EO EQUIP ELECTR MOTEUR) 1997-09-19) - column 4, line 27;	1-10	
	The present search report has			
	Place of search	Date of completion of the search	1	Examiner
<u> </u>	MUNICH	6 July 2001	Tang	occi, A
X : partici Y : partici docum A : techno O : non-v	TEGORY OF CITED DOCUMENTS ularly relevant if taken alone ularly relevant if combined with anot nent of the same category ological background written disclosure lediate document	L : document cited for	cument, but publish te n the application or other reasons	ned on, or

1

EP 01 10 1690

This annex lists the patent family members relating to the patent documents cited in the above-mentioned European search report. The members are as contained in the European Patent Office EDP file on The European Patent Office is in no way liable for these particulars which are merely given for the purpose of information.

	Patent documented in search repo		Publication date	Patent family member(s)	Publicatio date
ΕP	0671801	Α	13-09-1995	JP 7303351 A CN 1112744 A	14-11-1 29-11-1
JP	09172752	Α	30-06-1997	NONE	
US	4492885	Α	08-01-1985	DE 3211502 A FR 2502860 A	11-11-1 01-10-1
EP	0671803	Α	13-09-1995	JP 7303352 A CN 1112304 A,B CN 1112305 A,B DE 69502753 D DE 69509749 D DE 69509949 T EP 0671802 A JP 7303359 A US 5777407 A US 5751088 A	14-11-19 22-11-19 22-11-19 09-07-19 17-12-19 08-07-19 16-03-20 13-09-19 14-11-19 07-07-19
US	4757221	A	12-07-1988	JP 62221839 A DE 3779462 A DE 3779462 T EP 0238080 A KR 9005758 B	29-09-19 09-07-19 28-01-19 23-09-19 09-08-19
US	5329199	Α	12-07-1994	NONE	
EP	0762615	Α	12-03-1997	FR 2738684 A	14-03-19
US	5977668	Α	02-11-1999	JP 2000092787 A FR 2783109 A GB 2347276 A,B GB 2341279 A,B	31-03-20 10-03-20 30-08-20 08-03-20
EP	0917278	A	19-05-1999	CN 1208277 A EP 0881756 A EP 0910155 A JP 11164499 A JP 11243673 A JP 2000102215 A US 6097130 A US 6020669 A US 6091169 A	17-02-19 02-12-19 21-04-19 18-06-19 07-09-19 07-04-20 01-08-20 01-02-20 18-07-20
EP	0881747	Α	02-12-1998	WO 9854822 A	03-12-19



EP 01 10 1690

This annex lists the patent family members relating to the patent documents cited in the above-mentioned European search report. The members are as contained in the European Patent Office EDP file on The European Patent Office is in no way liable for these particulars which are merely given for the purpose of information.

cited in search report	Publication date	Patent family member(s)	Publication date
EP 0881747 A		AU 3686799 A	02-09-199
		AU 4222897 A	30-12-199
		AU 710990 B	07-10-1999
		AU 5829198 A	03-12-1998
		BR 9801214 A	13-07-1999
		BR 9801695 A	
		CA 2231123 A	05-10-1999
		CA 2231123 A CA 2238504 A	26-11-199
		CA 2238600 A	26-11-199
			26-11-199
			16-12-199
		CN 1208277 A	17-02-199
		CN 1208985 A	24-02-199
		CN 1200591 A	02-12-199
		DE 69800498 D	01-03-200
		EP 1026810 A	09-08-200
		EP 0881752 A	02-12-199
		EP 0881756 A	02-12-199
		EP 0881742 A	02-12-199
		EP 0881744 A	02-12-199
		EP 0881748 A	02-12-1998
	•	EP 0881749 A	02-12-1998
		EP 0881750 A	02-12-1998
		EP 0881745 A	02-12-1998
		EP 0881746 A	02-12-1998
		EP 0881751 A	02-12-1998
		EP 0881743 A	02-12-1998
		EP 0881753 A	02-12-1998
		ES 2154065 T	16-03-2001
		WO 9854823 A	03-12-1998
		JP 2000069729 A	
		US 5998903 A	03-03-2000
		US 6097130 A	07-12-1999
			01-08-2000
		US 5936326 A US 5952749 A	10-08-1999
		US 6011332 A	14-09-1999
			04-01-2000
			09-11-1999
		US 6124660 A	26-09-2000
		US 6137201 A	24-10-2000
		US 5955810 A	21-09-1999
		US 6051906 A	18-04-2000
		US 6198190 B	06-03-2001
		US 6144136 A	07-11-2000
		US 6181045 B	30-01-2001
		JP 11164505 A	18-06-1999
		JP 11164506 A	18-06-1999
		JP 11164519 A	18-06-1999

EP 01 10 .1690

This annex lists the patent family members relating to the patent documents cited in the above-mentioned European search report. The members are as contained in the European Patent Office EDP file on The European Patent Office is in no way liable for these particulars which are merely given for the purpose of information.

	t document search repo		Publication date	Patent family member(s)	Publication date
EP 088	31747	Α		JP 11346448 A	14-12-1999
				US 5986375 A	16-11-1999
EP 088	31748	Α	02-12-1998	WO 9854822 A	03-12-1998
				JP 11164504 A	18-06-1999
				AU 3686799 A	02-09-1999
				AU 4222897 A	30-12-1998
				AU 710990 B	.07-10-1999
				AU 5829198 A BR 9801214 A	03-12-1998
				BR 9801214 A BR 9801695 A	13-07-1999 05-10-1999
				CA 2231123 A	26-11-1998
				CA 2238504 A	26-11-1998
				CA 2238600 A	26-11-1998
				CN 1202028 A	16-12-1998
				CN 1208277 A	17-02-1999
				CN 1208985 A	24-02-1999
				CN 1200591 A	02-12-1998
				DE 69800498 D	01-03-2001
				EP 1026810 A	09-08-2000
				EP 0881752 A	02-12-1998
				EP 0881756 A EP 0881747 A	02-12-1998
				EP 0881747 A EP 0881742 A	02-12-1998
				EP 0881744 A	02-12-1998 02-12-1998
				EP 0881749 A	02-12-1998
				EP 0881750 A	02-12-1998
				EP 0881745 A	02-12-1998
				EP 0881746 A	02-12-1998
				EP 0881751 A	02-12-1998
				EP 0881743 A	02-12-1998
				EP 0881753 A	02-12-1998
				ES 2154065 T WO 9854823 A	16-03-2001
					03-12-1998
				JP 2000069729 A US 5998903 A	03-03-2000 07-12-1999
				US 6097130 A	01-08-2000
				US 5936326 A	10-08-1999
				US 5952749 A	14-09-1999
				US 6011332 A	04-01-2000
				US 5982068 A	09-11-1999
				US 6124660 A	26-09-2000
				US 6137201 A	24-10-2000
				US 5955810 A	21-09-1999
				US 6051906 A US 6198190 B	18-04-2000
				US 6198190 B	06-03-2001

EP 01 10 1690

This annex lists the patent family members relating to the patent documents cited in the above-mentioned European search report. The members are as contained in the European Patent Office EDP file on The European Patent Office is in no way liable for these particulars which are merely given for the purpose of information.

С	Patent documen ited in search rep		Publication date		Patent family member(s)	Publication date
El	P 0881748	Α		US	6144136 A	07-11-20
				US.	6181045 B	30-01-20
· Ef	0881749	Α	02-12-1998	WO	9854822 A	03-12-19
				JP	11164504 A	18-06-19
				JP	11075346 A	16-03-19
				AU	3686799 A	02-09-19
				AU	4222897 A	30-12-19
				AU	710990 B	07-10-19
				AU	5829198 A	03-12-19
				BR	9801214 A	13-07-19
				BR	9801695 A	05-10-19
				CA	2231123 A	26-11-19
				CA	2238504 A	26-11-19
				CA CN	2238600 A	26-11-19
				CN	1202028 A	16-12-19
				CN	1208277 A 1208985 A	17-02-199
				CN	1200591 A	24-02-199
				DE	69800498 D	02-12-199 01-03-200
				EP	1026810 A	09-08-200
				EP	0881752 A	02-12-199
				EP	0881756 A	02-12-199
				EP	0881747 A	02-12-199
				EP	0881742 A	02-12-199
				ΕP	0881744 A	02-12-199
				EP	0881748 A	02-12-199
				EP	0881750 A	02-12-199
				ΕP	0881745 A	02-12-199
				EP	0881746 A	02-12-199
				EP	0881751 A	02-12-199
				EP	0881743 A	02-12-199
			EP ES	0881753 A	02-12-199	
				WO	2154065 T 9854823 A	16-03-200
					000069729 A	03-12-199
				US	5998903 A	03-03-200 07-12-199
				US	6097130 A	07-12-199
				US	5936326 A	10-08-199
				US	5952749 A	14-09-199
				US	6011332 A	04-01-200
				US	5982068 A	09-11-1999
				US	6124660 A	26-09-200
				US	6137201 A	24-10-200
				US	5955810 A	21-09-1999
				US	6051906 A	18-04-2000

EP 01 10 1690

This annex lists the patent family members relating to the patent documents cited in the above-mentioned European search report. The members are as contained in the European Patent Office EDP file on The European Patent Office is in no way liable for these particulars which are merely given for the purpose of information.

06-07-2001

Patent document cited in search report	Publication date	Patent family member(s)	Publication date
EP 0881749 A		US 6198190 B US 6144136 A US 6181045 B JP 11164505 A JP 11164506 A JP 11164519 A JP 11346448 A	06-03-200 07-11-200 30-01-200 18-06-199 18-06-199
FR 2746227 A	19-09-1997	JP 11346448 A NONE	14-12-199

For more details about this annex : see Official Journal of the European Patent Office, No. 12/82